

DETAILED ACTION

Citation to the Specification will be in the following format (S. #,LL) where # denotes the page number and LL denotes the line number. Citation to U. S. Patent literature will be in the format (Inventor, #, LL) where # is the column number and LL is the line number. Foreign patent literature will be in the format (Inventor, P) where P denotes the paragraph number.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, **Claims 1-7**, drawn to an aqueous ink composition comprising a europium compound (europium compound (1) of the instant), a binder, and an aqueous medium, classified in class 106, subclass 31.14.

Group II, **Claim 8**, drawn to a colored body treated with an aqueous ink composition comprising a europium compound (europium compound (1) of the instant), a binder, and an aqueous medium, classified in class 106, subclass 403.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the common technical feature in the groups is an aqueous ink composition comprising a europium compound, a binder, and an aqueous medium. This element cannot be a special technical feature under PCT Rule 13.2 because the element is shown in the prior art. Imanishi et al. (US 6,846,350) discloses an aqueous ink composition comprising a europium compound, a binder, and an aqueous medium, substantially as in the instant application.

Applicant is advised that in order for the reply to this requirement to be complete, an election of the invention to be examined must be included even though the requirement may be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Status of Application

1. During a telephone conversation with Kevin Lemack on July 23, 2007, a provisional election was made with traverse to prosecute the invention of Group I,

Claims 1-7. Affirmation of this election must be made by applicant in replying to this Office action. **Claim 8** is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Priority

1. Applicant's claim for foreign priority in regard to DE 10344149.2, filed September 22, 2003, is acknowledged. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Abstract

1. The abstract of the disclosure is objected to because it contains the following informalities: it does not utilize complete sentences.

Claim Objections

1. **Claims 4-7** are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only, and cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, **Claims 4-7** have not been further treated on the merits.

Claim Rejections - 35 USC § 102

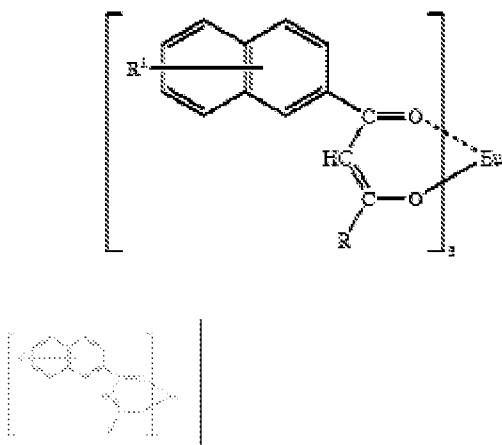
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-6** are rejected under 35 U.S.C. 102(e) as being anticipated by Imanishi et al. (US 6,846,350).

With regard to **Claim 1**, Imanishi discloses a luminous ink composition comprising an europium complex represented by the following formula, a binder, and an aqueous medium:



(Imanishi, 5, 59-64). Imanishi further teaches examples of a substitute group, R¹, which is analogous to the X group of the instant, specifically, a naphthalene cyclic group (Imanishi, 4, 23-67 and “Synthesis Example 1”). Imanishi further teaches a R group, analogous to the Y group of the instant, that includes a fluorinated hydrocarbon group having 1 to 10 carbon atoms (Imanishi, 4, 19-20) and the presence of an alkali metal-containing compound such as sodium hydroxide (Imanishi, 5, 54 and 7, 65).

With regard to **Claim 2**, Imanishi discloses an aqueous ink composition with a benzene cyclic group (Imanishi, 9, 55-65) and another ink composition with a thiophene cyclic group (Imanishi, 9, 30-40) in substitute group positions analogous to the X group position of the instant.

With regard to **Claim 3**, Imanishi discloses an aqueous ink composition with a trifluoromethyl group (Imanishi, 4, 2-4, 26-36, and 55-67) in a position analogous to the Y position of the instant.

For examination purposes, it will be assumed that **Claims 4-5 and 7** all depend on **Claim 1**.

With regard to **Claim 4**, Imanishi discloses an aqueous ink composition with the presence of an alkali metal-containing compound (sodium hydroxide) in the ink synthesis (Imanishi, 7, 65). The dissociation of sodium hydroxide would result in the presence of sodium ions in the reaction medium.

With regard to **Claim 5**, Imanishi discloses an aqueous ink composition wherein the binder is a water-soluble high-molecular compound (Imanishi, 6, 48-67 and 7, 1-5).

With regard to **Claim 6**, Imanishi discloses an aqueous ink composition wherein the binder is polyvinyl alcohol, modified polyvinyl alcohol, or a polymer having a cyclic amide group in its molecular structure (Imanishi, 6, 59-64).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 4116

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Imanishi (US 6,846,350) in view of Lent et al. (US 5,837,042).

With regard to **Claim 7**, Imanishi discloses an aqueous ink composition wherein the preferable content of the europium compound is 0.1 to 3% by weight (Imanishi, 6, 7-8), the content of the binder is 1 to 20% by weight (Imanishi, 7, 10-23), and the content of the aqueous medium is 80 to 95% by weight (Imanishi, 6, 23-25). The content of europium compound and content of aqueous medium are both anticipated by Imanishi because the ranges taught by Imanishi fall within those of the instant. The content of

Art Unit: 4116

binder range taught by Imanishi does not specifically teach the range of the instant; however, it overlaps the range taught by the instant. Lent teaches a preferable binder content of from about 1 to 15% by weight (Lent, 11, 23-25). Thus, it would have been obvious to one of ordinary skill in the art to modify the binder content taught by Imanishi with that taught by Lent in order to allow for optimal injection stability of the ink composition (Imanishi, 7, 15-23).

Conclusion

1. No claim is allowed.
2. In general, prior art renders the claimed invention anticipated and obvious.
3. Applicant is required to provide pinpoint citation to the specification (i.e. page and paragraph number) to support any amendments to the claims in all subsequent communication with the examiner. **No new matter will be allowed.**
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brittany M. Martinez whose telephone number is (571) 270-3586. The examiner can normally be reached Monday-Thursday 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4116

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BMM

/Vickie Kim/

Supervisory Patent Examiner, Art Unit 4116